Amendments to and Listing of the Claims:

Kindly amend the application without prejudice as follows.

Please cancel pending claims 44-49, 51-53, 63, 70-79, 83 and 84, such that all prior pending claims have been cancelled. Please insert new claims 86-107 as set forth in the following listing of claims.

1. to 85. (Cancelled)

86. (New) A neuronal tissue derived from midbrain tissue of a mammal, the neuronal tissue consisting essentially of:

treated cells made by transiently contacting neuronal progenitor cells from midbrain tissue of a mammal with a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-11, interleukin-1b, and thyroid hormone, such that the treated cells become determined cells that will differentiate into substantially only dopaminergic neurons upon subsequent treatment with one of (1) differentiation induced by an additional contact with any of the differentiation-promoting factors, and (2) transplantation,

wherein the treated, determined cells maintain their capacity to perform mitosis, and

wherein the neuronal tissue does not comprise cells that give rise to sufficient glial cells to provoke an immune response upon implantation of the neuronal tissue into a recipient.

87. (New) The neuronal tissue of claim 86, wherein more than 90% of the subsequently treated cells of the tissue will differentiate into dopaminergic neurons.

88. (New) The neuronal tissue of claim 86, wherein more than 95% of the subsequently treated cells of the tissue will differentiate into dopaminergic neurons.

89. (New) The neuronal tissue of claim 86, wherein the mammal is a human.

90. (New) The neuronal tissue of claim 89, wherein the human is an adult.

91. (New) The neuronal tissue of claim 89, wherein the human is an embryo.

92. (New) The neuronal tissue of claim 86, wherein the subsequent treatment of the treated, determined cells is with one of (1) in vitro differentiation induced by an additional contact with any of the differentiation-promoting factors and (2) in vivo transplantation.

93. (New) A neuronal tissue derived from a single midbrain cell of a mammal, the neuronal tissue consisting essentially of:

treated cells made by transiently contacting a single neuronal progenitor cell from midbrain tissue of a mammal with a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-11, interleukin-1b, and thyroid hormone, such that the treated cells become determined cells that will differentiate into substantially only dopaminergic neurons upon subsequent treatment of the determined cells with one of (1) differentiation induced by an additional contact with any of the differentiation-promoting factors, and (2) transplantation, wherein the treated, determined cells maintain their capacity to perform mitosis, and

expanding the treated, determined cells,

wherein the neuronal tissue does not comprise cells that give rise to sufficient glial cells to provoke an immune response upon implantation of the neuronal tissue into a recipient.

94. (New) A neuronal tissue derived from midbrain tissue of a mammal, wherein the neuronal tissue consists essentially of treated cells made by transiently contacting neuronal progenitor cells from midbrain tissue of a mammal with a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-11, interleukin-1b, and thyroid hormone, such that the treated cells become determined cells that will differentiate into substantially only dopaminergic neurons upon subsequent treatment of the treated, determined cells with one of (1) differentiation induced by an additional contact with any of the differentiation-promoting factors, and (2) transplantation,

wherein the treated, determined cells maintain their capacity to perform mitosis,

wherein the neuronal tissue does not comprise sufficient cells that give rise to glial cells to provoke an immune response upon implantation of the neuronal tissue into a recipient, and

wherein the neuronal tissue is obtained by a method comprising:

(a) dissecting midbrain tissue;

(b) isolating neuronal progenitor cells from midbrain tissue;

(c) proliferating the progenitor cells;

(d) treating the progenitor cells by transiently exposing the progenitor cells to the differentiation-promoting factor, wherein the treated cells become determined;

(e) sub-cloning one of treated, determined cells obtained in step (d); and

(f) proliferating the sub-cloned, treated, determined cell obtained in step (e),

whereby a population of expanded, treated cells that maintain their capability to perform mitosis is synthesized, the population being the neuronal tissue.

95. (New) The neuronal tissue of claim 94, wherein more than 90% of the subsequently treated cells of the tissue will differentiate into dopaminergic neurons.

96. (New) The neuronal tissue of claim 94, wherein step (d) is performed more than once.

97. (New) The neuronal tissue of claim 94, wherein at least one of steps (c), (d) and (e) is conducted at a sub-atmospheric oxygen level.

98. (New) The neuronal tissue of claim 97, wherein the oxygen level is less than 10%.

99. (New) The neuronal tissue of claim 94, wherein step (c) is conducted at a sub-atmospheric oxygen level.

100. (New) The neuronal tissue of claim 94, wherein at least one of the steps (c), (d) and (e) is conducted at a condition which simulates a reduced atmospheric oxygen level.

101. (New) The neuronal tissue according to claim 100, wherein the condition is achieved using an inhibitor of mitochondrial respiration.

102. (New) The neuronal tissue of claim 100, wherein step (c) is conducted at a condition which simulates a reduced atmospheric oxygen level.

103. (New) The neuronal tissue of claim 94 in a serum-free medium.

104. (New) A neuronal tissue that does not comprise cells that give rise to sufficient glial cells to provoke an immune response upon implantation of the neuronal tissue into a recipient, the neuronal tissue made by transiently contacting in vitro (i) neuronal progenitor cells obtained from midbrain tissue of a mammal and (ii) a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-11, interleukin-1b, and thyroid hormone, for a period of time that is (a) sufficient to make treated, determined cells that will differentiate into substantially only dopaminergic neurons upon subsequent treatment of the determined cells with one of (1) differentiation induced by an additional contact with the differentiation-promoting factor, and (2) transplantation, and (b) not sufficient to eliminate capability of the treated cells to perform mitosis.

105. (New) The neuronal tissue of claim 104, wherein substantially all of the treated cells in the neuronal tissue will differentiate into dopaminergic neurons upon the subsequent treatment, and wherein the neuronal tissue is further made by selecting and proliferating a single treated, determined cell, wherein the single cell is selected on the basis that it expresses a marker characteristic of dopaminergic neurons.

106. (New) The neuronal tissue of claim 105, wherein the treated, determined cell is proliferated by contacting the cell with an inhibitor of mitochondrial respiration after selecting the cell.

107. (New) A neuronal tissue derived from midbrain tissue of a mammal, the neuronal tissue consisting essentially of:

treated, determined cells that have been obtained by treatment by transient contact of neuronal progenitor cells obtained from midbrain tissue of a mammal with a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-11, and thyroid hormone, and that will differentiate into substantially only dopaminergic neurons upon subsequent treatment of the treated, determined cells with one of (1) in vitro differentiation induced by an additional contact

with any of the differentiation-promoting factors, and (2) in vivo transplantation, and express a receptor selected from the group consisting of tyrosine hydroxylase, NURR1, and NURR77,

wherein the treated cells maintain their capacity to perform mitosis, and

wherein the neuronal tissue does not comprise cells that give rise to sufficient glial cells to provoke an immune response upon implantation of the neuronal tissue into a recipient.